CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION NO. R5-2006-XXX

AMENDMENT TO THE WATER QUALITY CONTROL PLAN
FOR
THE SACRAMENTO RIVER AND SAN JOAQUIN RIVER BASINS
FOR
THE CONTROL OF NUTRIENTS IN CLEAR LAKE

WHEREAS, the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) finds that:

1. In 1975 the Central Valley Water Board adopted the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan), which has been amended occasionally.

2. The Basin Plan may be amended in accordance with the California Water Code Section 13240, et seq.

3. Water Code section 13242 sets forth the requirements for a program for implementation for achieving water quality objectives.

4. Clear Lake is listed on the 303(d) list as impaired due to nuisance algae blooms.

5. The Central Valley Water Board recognizes that the Basin Plan does not include a plan to control nutrients in Clear Lake; therefore, a Basin Plan amendment is appropriate.

6. The regulatory action proposed meets the “Necessity” standard of the Administrative Procedures Act, Government Code, section 11353, subdivision (b).

7. The Central Valley Water Board has prepared draft amendments, which establish a framework for further study and a phosphorus control program for Clear Lake.

8. The proposed amendments will revise Chapter IV (Implementation) and Chapter V (Surveillance and Monitoring) of the Basin Plan.

9. The basin planning process has been certified as “functionally equivalent” to the California Environmental Quality Act requirements for preparing environmental documents as specified in Title 23 California Code of Regulations (23 CCR) Section 3782 and is, therefore, exempt from those requirements (Public Resources Code, Section 21000 et seq.).

10. The Central Valley Water Board staff held a scoping meeting on 5 May 2005 and the Central Valley Water Board held a public workshop on 5 May 2006 to receive comments on the draft amendment and to identify any significant issues that must be considered.

11. Central Valley Water Board staff developed a draft staff report and draft Basin Plan Amendment for external scientific peer review in November 2005 in accordance with Health and Safety Code Section 57004 and the draft final staff report and amendment have been changed to conform to the recommendations of the peer reviewers or staff has provided an explanation of why no change was made.

12. The Central Valley Water Board finds that the scientific portions of the Basin Plan Amendment are based on sound scientific knowledge, methods, and practices in accordance with Health and Safety Code Section 57004.

13. Central Valley Water Board staff has prepared a draft amendment and a staff report dated May 2006.

14. Central Valley Water Board staff completed an environmental checklist that concluded that the proposed amendment results in no potential for adverse effect, either individually or cumulatively, on wildlife.

15. The draft amendment, staff report, and environmental checklist have been noticed and circulated to interested individuals and public agencies for review and comment in accordance with state and federal environmental regulations (23 CCR Section 3775, 40 CFR 25, and 40 CFR 131).

16. The Central Valley Water Board held a public hearing on 23 June 2006, for the purpose of receiving testimony on the draft Basin Plan amendment. Notice of the public hearing was sent to all interested persons and published in accordance with California Water Code, section 13244.

17. The Central Valley Water Board has considered the factors set forth in Water Code section 13241, including economic considerations, in developing this proposed amendment.

18. The Central Valley Water Board finds that the proposed amendment is consistent with the State Water Resources Control Board Resolution No. 68-16, in that the changes to water quality objectives (i) consider maximum benefit to the people of the state, (ii) will not unreasonably affect present and anticipated beneficial use of waters, and (iii) will not result in water quality less than that prescribed in policies, and the proposed amendment is consistent with the federal Antidegradation Policy (40 CFR part 131.12). The proposed amendment requires responsible parties to reduce phosphorus inputs to Clear Lake, which should result in a reduction of nuisance algae blooms. Such actions are of maximum benefit to the people of the state. The proposed amendment will not unreasonably affect present and anticipated beneficial uses nor result in water quality less than described in applicable policies because the amendment is intended to result in compliance with water quality objectives. The actions to be taken are not expected to cause other impacts on water quality.

19. A Basin Plan amendment must be approved by the State Water Board, Office of Administrative Law (OAL), and USEPA before becoming effective.

20. The Central Valley Water Board finds that the amendment to the Basin Plan was developed in accordance with California Water Code Section 13240, et seq.

THEREFORE BE IT RESOLVED:

1. Pursuant to Section 13240, et seq. of the California Water Code, the Central Valley Water Board, after considering the entire record, including oral testimony at the hearing, hereby approves the staff report and adopts the amendment to the Basin Plan as set forth in Attachment 1.

2. The Executive Officer is directed to forward copies of the Basin Plan amendment to the State Water Board in accordance with the requirements of Section 13245 of the California Water Code.

3. The Central Valley Water Board requests that the State Water Board approve the Basin Plan amendment in accordance with the requirements of Sections 13245 and 13246 of the California Water Code and forward it to OAL and the USEPA.

4. If during its approval process the Central Valley Water Board staff, State Water Board or OAL determines that minor, non-substantive corrections to the language of the amendment are needed for clarity or consistency, the Executive Officer may make such changes, and shall inform the Central Valley Water Board of any such changes.

5. The Central Valley Water Board concurs with staff's conclusion that the proposed amendment will have no potential for adverse effects, either individually or cumulatively, on wildlife or the environment and the Executive Officer is authorized to sign a Certificate of Fee Exemption and following approval of the Basin Plan amendment by the OAL submit this Certificate in lieu of payment of the Department of Fish and Game filing fee to the Secretary for Resources.

6. The environmental documents prepared by Central Valley Water Board staff pursuant to Public Resources Code Section 21080.5 are hereby certified and, following approval of the Basin Plan amendment by the OAL, the Executive Officer shall file a Notice of Decision with the State Clearinghouse.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on 23 June.

PAMELA C. CREEDON, Executive Officer

Attachments: Attachment 1: Amendment to Basin Plan for the Control of Nutrients in Clear Lake

Alternative Attachment 1: Amendment to the Basin Plan for the Control of Nutrients in Clear Lake – Alternative Language.

ATTACHMENT 1
RESOLUTION NO. R5-2006-XXX
AMENDMENT TO BASIN PLAN
FOR
THE CONTROL OF NUTRIENTS IN CLEAR LAKE

Revise Basin Plan sections as follows:

CHAPTER IV: IMPLEMENTATION

Central Valley Water Board staff proposes the following language be added after the new subheading **Clear Lake Nutrients**.

1. Nuisance algae blooms impair beneficial uses in Clear Lake, which is a violation of the narrative basin plan objective that states "water shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses".

2. Studies indicate that the incidence of algal blooms can be significantly reduced if phosphorus loads to the lake are reduced by 40%. This would equal an annual allowable loading of approximately 87,100 kg. Therefore, for this implementation plan, an average annual (five year rolling average) phosphorus load of 87,100 kg is established as the loading capacity for Clear Lake.

3. Waste load allocations for the NPDES facilities discharging to the lake or tributaries are as follows:

    a. Lake County Stormwater Permittees (Lake County, City of Clearlake, City of Lakeport) - 2,000 kg/yr
    b. California Department of Transportation (Caltrans) – 100 kg/yr

4. The load allocation for nonpoint source dischargers is 85,000 kg/yr (average annual load based on five year rolling average). The U.S. Bureau of Land Management (USBLM), U.S. Forest Service (USFS), Lake County (County) and irrigated agriculture are responsible for controlling phosphorus discharges from those portions of the watershed within their respective authority.

5. Pursuant to CWC 13267, the Executive Officer will at a minimum require dischargers of runoff from irrigated agriculture to submit management plans consistent with the Regional Water Board's Irrigated Lands Conditional Waiver Program requirements or any applicable waiver of waste discharge requirements or waste discharge requirements. The management plans will

a. Describe the actions that the discharger will take to reduce phosphorus discharges and achieve load allocations.
b. Provide an estimate of the current phosphorus loads from irrigated agricultural lands.

The management plans are due no later than [five years after approval by OAL]. An update to the management plans is due on [ten years after approval by OAL].

6. Pursuant to CWC 13267, the Executive Officer will require responsible parties–Lake County, City of Clearlake, City of Lakeport, Caltrans, USBLM, and USFS– to submit a plan to the Regional Water Board, which will include items a. through h., as applicable, below, by [five years after approval by OAL]. By [ten years after approval by OAL], responsible parties are also required to submit progress reports that update progress on items a. through h., as indicated below. The plan and progress reports can be submitted by each entity or combined into one report.

   The County shall be responsible for providing:

   a. Estimation of annual phosphorus loads to the Lake
   b. Description of practices implemented to comply with existing on-site wastewater treatment system ordinances and an evaluation of effectiveness of these practices.
   c. Description of conditions in the lake related to nuisance algae blooms.

   For activities on lands they manage, the USBLM and USFS shall be responsible for providing:

   d. Description of actions to control erosion from grazing, an evaluation of their effectiveness, and estimates of phosphorus loading from grazing.

   All responsible parties shall be responsible for providing:

   e. Estimates of phosphorus loads from each of the responsible parties.
   f. Description of actions implemented to control phosphorus loads entering the lake and an estimate of resulting load reductions.
   g. Description of actions planned to control phosphorus loads entering the lake to achieve load and waste load allocations, and an estimate of expected load reductions.
   h. Description of actions to control erosion from unpaved roads, an evaluation of their effectiveness, and estimates of phosphorus loading from unpaved roads.

7. The Regional Water Board intends to periodically review the phosphorus loading capacity and allocations and the implementation provisions, with the first review beginning no later than [five years and three months after approval by OAL]. The Regional Water Board recommends that studies be conducted on Clear Lake prior to this date to confirm that the allocations are appropriate. The Regional Water Board will review the studies and determine if there is sufficient information to adopt a water quality objective for Clear Lake or to make changes to the loading capacity and allocations.

8. Compliance with load and waste load allocations is required by [ten years after approval by OAL].

The proposed modification ads a new subheading under "Estimated Costs of Agricultural Water Quality Control Programs and Potential Sources of Financing" labeled **Clear Lake Nutrient Control Program.**

The total estimated costs for the development of management plans are estimated at $10,000 to $16,000 (2006 dollars). Estimated costs to implement BMPs are $400,000 to $1,800,000 (2006 dollars).

Potential funding sources include:

1. Those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program and the Pesticide Control Program.

CHAPTER V: SURVEILLANCE AND MONITORING

Central Valley Water Board staff proposes to add a new heading in Chapter V entitled **Clear Lake Nutrients**, which will include the following language.

The responsible parties – Lake County, City of Clearlake, City of Lakeport, Caltrans, USBLM, and USFS – who conduct water quality monitoring shall measure their contribution to phosphorus loading to the lake and shall assess the effectiveness of their implementation activities. Monitoring shall also occur within Clear Lake to assess the occurrence of nuisance algae blooms in the lake. To assess algae growth, Secchi disk depth or chlorophyll-a shall be monitored.

The monitoring and reporting program for any waste discharge requirements or waiver of waste discharge requirements that addresses nutrient runoff from irrigated lands in the Clear Lake watershed must determine the phosphorus loading from the irrigated lands.

ALTERNATIVE ATTACHMENT 1
RESOLUTION NO. R5-2006-XXX
AMENDMENT TO BASIN PLAN
FOR
THE CONTROL OF NUTRIENTS IN CLEAR LAKE
ALTERNATIVE LANGUAGE

Revise Basin Plan sections as follows:

CHAPTER IV: IMPLEMENTATION

Central Valley Water Board staff proposes the following language be added after the new subheading **Clear Lake Nutrients**.

Nuisance algae blooms impair beneficial uses in Clear Lake, which is a violation of the narrative basin plan objective that states "water shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses"

Research and studies have concluded that there are likely multiple factors that influence the occurrence of nuisance algae blooms in Clear Lake. Recent improvements in water clarity may be due to a reduction in phosphorus loading or a result of other factors such as iron or sulfur availability, changes to lake ecology (introduced species, etc.), water year type or a combination of factors. For the purposes of this program of implementation both phosphorus loading and other factors that may affect algae growth will be addressed.

1. Modeling studies predict that a 40% reduction in average phosphorus loading will significantly reduce the incidence of algae blooms. This would equal an annual allowable loading of approximately 87,100 kg. Therefore, for this program of implementation, an average annual (five year rolling average) phosphorus load of 87,100 kg is established as the loading capacity for Clear Lake.

2. Waste load allocations for the NPDES facilities discharging to the lake or tributaries are as follows:

    a. Lake County Stormwater Permittees (Lake County, City of Clearlake, City of Lakeport) - 2,000 kg/yr
    b. California Department of Transportation (Caltrans) – 100 kg/yr

3. The load allocation for nonpoint source dischargers is 85,000 kg/yr average annual load (five year rolling average). The U.S. Bureau of Land Management (USBLM), U.S. Forest Service (USFS), Lake County (County) and irrigated agriculture are responsible for controlling

phosphorus discharges from those portions of the watershed within their respective authority.

4. Regional Water Board staff will work with the responsible parties – Stormwater permittees, Caltrans, USBLM, USFS, County and irrigated agriculture – to develop and implement a plan to collect the information needed to determine what factors are important in controlling nuisance blooms and to recommend what control strategy should be implemented. The responsible parties will submit the plan to the Regional Water Board by [one year after approval by OAL]. The plan should address the following topics:
    - Studies to assess the current limnological conditions and to determine the appropriate measures necessary for Clear Lake to meet the Basin Plan objectives
    - Appropriate monitoring for evaluating conditions in the lake
    - Effective collection of phosphorus loading information from the various sources
    - Practices implemented or planned to control phosphorus loading to the lake
    - Develop criteria to determine when Clear Lake is no longer impaired

5. Compliance with load and waste load allocations is required by [ten years after approval by OAL]. However, by [five years and three months after approval by OAL], the Regional Board will consider information developed and determine whether the phosphorus load and waste load allocations should continue to be required or if some other control strategy or approach is more appropriate. To the extent that other controllable water quality factors, besides phosphorus, cause or contribute to nuisance algae blooms, those factors will be addressed in revisions to this program of implementation.

6. If Clear Lake is attaining its beneficial uses and the Regional Water Board determine that phosphorus loads above allocated amounts are not causing or contributing to nuisance algae problems these load and waste load allocations will no longer apply.

The proposed modification ads a new subheading under “Estimated Costs of Agricultural Water Quality Control Programs and Potential Sources of Financing” labeled **Clear Lake Nutrient Control Program.**

Estimated costs to implement BMPs, if necessary, are $400,000 to $1,800,000 (2006 dollars).

Potential funding sources include:

1. Those identified in the San Joaquin River Subsurface Agricultural Drainage Control Program and the Pesticide Control Program.

CHAPTER V: SURVEILLANCE AND MONITORING

Regional Water Board staff proposes to add a new heading in Chapter V entitled **Clear Lake Nutrients**, which will include the following language.

The responsible parties – Lake County, City of Clearlake, City of Lakeport, Caltrans, USBLM, USFS and irrigated agriculture – who conduct water quality monitoring shall measure their contribution to phosphorus loading to the lake and shall assess the effectiveness of their implementation activities. Monitoring shall also occur within Clear Lake to assess the occurrence of nuisance algae blooms in the lake. To assess algae growth, Secchi disk depth or chlorophyll-a shall be monitored.